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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,603	05/03/2002	Guanzhong Gao	124048	9697

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GENERAL ELECTRIC COMPANY
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PATENT DOCKET RM. 4A59
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EXAMINER

LIEU, JULIE BICHNGOC

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 01/15/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/063,603

Applicant(s)

GAO ET AL.

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 is/are allowed.
- 6) ☒ Claim(s) 1,4-14,19,21-23,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 2,3,15-18,20,24 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 and 9-10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, "said capacitance enhancing layer" lacks antecedent basis.

Regarding claim 9, it appears that the first set and the second set of wires are indeed the same set of wires.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1- are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregory et al. (US Patent Application No. 2003/0151412).

Claim 1:

Gregory discloses a monitoring system comprising at least one partial discharge sensor 24, which is configured to monitor a component of a wiring system to acquire monitoring signal. Though the wiring system to be monitored in Gregory is not necessary use for an aircraft component. However, it would have been obvious to one skilled in the art to use the same concept in any environment as well as in an aircraft system because the function of the device is to detect partial discharge and its function would not thereby be modified.

Claim 5:

The PD sensor in Gregory comprises a high frequency current transformer.

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Claim 6:

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The component in Gregory is a conductive core surrounded by an insulating layer, i.e. a cable, and wherein the current transformer 24 sensor extends around the insulating layer.

Claim 7:

Though a PD sensor in Gregory is used to monitor a cable, it would have been obvious to one skilled in the art to use it to monitors as desired because they are similar except a cable is larger than a wire. The PD sensor in Gregory would still function the same. Though only one cable is shown in Gregory, it would have been obvious to one skilled in the art to use the PD devices taught in Gregory with a plurality of wires or cable, each wire/cable comprising a conductive core surrounded by an insulating layer, wherein the current transformer sensor extends around the wires.

Claim 8:

The monitoring unit in Gregory includes the PD sensor.

Claim 11:

The monitoring unit in Gregory comprises a self-monitoring unit, wherein the component comprises a wire set, which includes at least one wire and is connected to the self-monitoring unit, wherein the PD sensor is configured to monitor the wire.

Claim 12:

Fig. 6 in Gregory shows a system equivalent to a data acquisition system, which is configured to receive the monitoring signal; and at least one hard-wired connector configured to connect the monitoring unit to the data acquisition system for conveying the monitoring signal.

Claim 13:

The monitoring unit further comprises a transmitter, which is configured to transmit a monitoring signal.

Claim 14:

The data acquisition system in Gregory includes a receiver which is configured to receive the monitoring signal, and a memory which is configured to store the monitoring signal.

Claim 18:

Gregory discloses a monitoring system comprising at least one partial discharge sensor 24, which is configured to monitor a component of a wiring system to acquire monitoring signal. Though the wiring system to be monitored in Gregory is not necessary use for an aircraft component. However, it would have been obvious to one skilled in the art to use the same concept in any environment as well as in an aircraft system because the function of the device is to detect partial discharge and its function would not thereby be modified.

Gregory shows only one unit. Nonetheless, it would have been obvious to one skilled in the art to use a plurality of monitoring units as desired because the multiplicity of the devices would not alter its functions.

Fig. 6 in Gregory shows a system equivalent to a data acquisition system, which is configured to receive the monitoring signal; and at least one hard-wired connector configured to connect the monitoring unit to the data acquisition system for conveying the monitoring signal.

Claim 20:

The monitoring unit in Gregory comprises a self-monitoring unit, wherein the component comprises a wire set, which includes at least one wire and is connected to the self-monitoring unit, wherein the PD sensor is configured to monitor the wire.

Claim 24:

The rejection of claim 24 recites that rejection of claim 18 except it is a method claim.

Claim 28:

The monitoring system in Gregory comprises a test interface comprising at least one PD sensor 24, which is configured to monitor the component and acquire a monitoring signal; and a data acquisition system (fig. 6) which is configured to receive the monitoring system.

Claim 29:

Though a display is not shown in Gregory, it would have been obvious to one skilled in the art to use a display in the Gregory system because it would provide the user with unambiguous information.

Claim 30:

The device in Gregory comprises a wire set including at least one wire and a connector connected to the wire set and wherein the test interface is configured to matingly connect to the connector 42. Though a PD sensor in Gregory is used to monitor a cable, it would have been obvious to one skilled in the art to use it to monitor

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as desired because they are similar except a cable is larger than a wire. The PD sensor in Gregory would still function the same.

Allowable Subject Matter

5. Claim 27 is allowed.

6. Claims 2, 3, 15-17, 19, 20, 24, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 4 and 9-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 703-308-6738. The examiner can normally be reached on MaxiFlex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Hofsass can be reached on 703-305-4717. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Julie Lieu
Primary Examiner
Art Unit 2636

January 11, 2004

Julie
Primary
Art Unit
2636